Customer No. 24498
Attorney Docket No. PU020105
Advisory Action Date: November 3, 2008

Remarks/Arguments

Claims 1-24 are pending in this application. Claims 1-24 are rejected in the final Office Action of August 20, 2008, and remain rejected in the Advisory Action dated November 3, 2008. Claims 1, 5, 7, 11, 14, 18 and 21 are amended herein to more particularly point out and distinctly claim the subject matter Applicants regard as their invention.

Re: Claims 1, 7, 14 and 21-24

Claims 1, 7, 14 and 21-24 are rejected under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 6,728,965 issued to Mao (hereinafter, "Mao") in view of U.S. Patent Publication No. 2001/0033342 by Kim (hereinafter, "Kim"). Applicants respectfully traverse this rejection for at least the following reasons.

At the outset, Applicants again note that the present invention addresses and solves the problem that in a digital television system, in order to perform a channel change, the receiver must first wait to receive program specific information that is received via the incoming datastream before programming associated with a newly selected channel can be decoded and displayed. The program specific information must be extracted, and elements of the receiver must be configured based on this information in order to receive desired channel and begin decoding. The program specific information may include for example, program association table data, and program map table data (see page 1, line 31 to page 2, line 8; page 5, lines 24 to 28 of Applicants' specification). Additionally, the incoming datastream also includes decoder synchronized data, e.g., sequence headers, that must be acquired before decoding can begin (see page 6, lines 12 to 13 of Applicants' specification). The delay in acquiring the necessary program specific information and decoder synchronization data may cause a delay in changing from one channel to another.

The present invention addresses and solves this problem by providing for the *initiation of a data caching operation immediately after a channel change event.*

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The caching operation enables incoming sequence header data to be cached so that it may be found quickly after the program association table data and program map table data is captured and processed (see page 6, lines 26-32 of Applicants' specification). Thus, a notable aspect of the claimed invention is that the caching operation is initiated *in response to* receiving a channel change command.

In that regard, independent claim 1 recites:

"... *initiating caching* of an incoming datastream associated with a newly selected channel *in response to the channel change command*, the incoming datastream including program specific information ... transferring the cached data stream for decoding in response to the program specific information. (emphasis added)"

Independent claims 7, 14, 21 and 23 recite features similar to claim 1 above. Applicants submit that neither Mao nor Kim, whether taken individually or in combination, teaches or suggests, *inter alia*, the claimed feature of initiating a caching operation in response to a channel change command, as provided by independent claims 1, 7, 14, 21 and 23.

On page 2 of the final Office Action dated August 20, 2008, the Examiner specifically alleges that the claimed feature of "initiating caching of an incoming data stream associated with a newly selected channel in response to the channel change command" is disclosed on column 2, lines 32-36 of Mao. Applicants respectfully disagree. In particular, Applicants note that column 2, lines 32-44 of Mao state:

"Each digital video signal includes a synchronization frame. The subject channel changer captures the multiple compressed video signals and stores each signal in a cache buffer. A processor is used to index or "point to" the respective synchronization frames for each buffered signal. When a subscriber requests a specific channel or video service, the processor can immediately access the requested video signal at a synchronization frame and direct the video stream to the subscriber since the processor already has the position of the synchronization frame of each video signal. Accordingly, the period of time that the subscriber previously had to wait for the synchronization frame is eliminated." (emphasis added)

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As indicated above, the cited passage of Mao teaches a method in which, when a specific channel is requested (e.g., a channel change event), a processor accesses the requested video signal corresponding to the requested channel at a synchronization frame (i.e., an "I" frame) in a cache buffer (see also, column 8, lines 52-55 of Mao). In this manner, Mao expressly teaches a method in which the caching of an incoming datastream is initiated *before* a channel change command is ever received. In particular, Mao ostensibly teaches a method in which an incoming datastream is continuously cached and output on a first-in, first-out basis (see column 8, lines 14-51 of Mao). Accordingly, Mao fails to teach or suggest, *inter alia*, a method in which a caching operation is *initiated* in response to a channel change command, as claimed.

In the Advisory Action dated November 3, the Examiner further alleges:

"Mao teaches initiating caching of an incoming data stream associated with the newly selected data stream when the remainder of the frames are buffered once a channel change command has been issued Col. 7 lines 8-25. Moreover, whenever a channel is selected it is well known in the art to start buffering the video stream reated [sic, related] to the requested channel for decoding."

As indicated above, the Examiner now ostensibly alleges that the claimed feature of "initiating caching of an incoming data stream associated with a newly selected channel in response to the channel change command" is disclosed on column 7, lines 8-25 of Mao. Applicants respectfully disagree. In particular, Applicants note that column 7, lines 8-25 of Mao state:

"After receiving the request from a subscriber to change to a new channel, the BDT 12 must then wait for the Group of Picture (GOP) start point of the requested channel. Even if the ATM system is dedicated strictly to video, the time between GOP start points is significant. As illustrated in FIG. 4, the time delay between GOP_{B1} and GOP_{B2} may be 1/2 second or more depending on the compression scheme and other factors.
After the BDT 12 synchronizes with the appropriate GOP start point, it can then decompress the requested signal and direct it to the subscriber(s) who have requested it. The signal corresponding to the

requested channels is then multiplexed with the signals corresponding to the requested channel of all other subscribers handled by that BDT 12. The multiplexed signal is then transmitted downstream to BNU 14, where the signal is demuxed and directed to the appropriate set-top units 19."

As indicated above, the cited passage of Mao <u>nowhere</u> teaches or suggests, *inter alia*, a method in which a caching operation is ***initiated*** <u>in response to a channel change command</u>, as claimed. Rather, this passage of Mao, read in the context of the entire reference, simply confirms that <u>Mao expressly teaches a method in which the caching of an incoming datastream is initiated *before* a channel change command is ever received</u> (see, again, column 8, lines 52-55) and ostensibly teaches a method in which an incoming datastream is <u>continuously cached</u> and output on a first-in, first-out basis (see, again, column 8, lines 14-51).

The examiner additionally alleges that it is well known in the art to start buffering the video stream related to the requested channel for decoding whenever a channel is selected. Applicants are not aware that such a feature is well known. Rather, it is believed that previous systems require acquisition of this data before buffering begins. Therefore, applicants respectfully request that the examiner provide a valid prior art reference disclosing such a feature so that applicants can more fully respond to the examiner's assertions.

Secondary reference, Kim, is relied on for teaching the limitation wherein an incoming data stream includes program specific information (see page 3 of the final Office Action dated August 20, 2008), but also fails to teach or suggest, *inter alia*, the claimed feature of initiating a caching operation in response to a channel change command, as provided by independent claims 1, 7, 14, 21 and 23. As such, Kim is unable to remedy the aforementioned deficiencies of Mao. Accordingly, the proposed combination of Mao and Kim fails to teach or suggest all elements of the claimed invention, and withdrawal of the rejection is respectfully requested.

Re: Claims 2-6, 8-13 and 15-20

Claims 2-6, 8-13 and 15-20 are rejected under 35 U.S.C. §103(a) as being unpatentable over Mao in view of Kim, and further in view of U.S. Patent No. 6,490,001 issued to Shintani et al. (hereinafter, "Shintani"). Applicants respectfully traverse this

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